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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,427	01/31/2001	Bryan D. Skene	50002.05USU1	6987
38878	7590	08/16/2004	EXAMINER	
DARBY & DARBY P.C. P.O. BOX 5257 NEW YORK, NY 10150-5257			BOUTAH, ALINA A	
			ART UNIT	PAPER NUMBER
			2143	

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/773,427

Applicant(s)

SKENE ET AL.

Examiner

Alina N Boutah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-22 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/14/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: the inventors' signatures are missing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5-12 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPAP 2002/0040400 by Masters.

Regarding claim 1, Masters teaches a method for enabling a client to access a resource on a wide area network environment, comprising:

(a) receiving a request for the resource from a connection that is associated with the client (abstract);

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(b) selecting a method for load balancing each request from the connection [0013];

(c) employing the selected method to select a server array controller to handle each request from the connection to the resource [0013; 0055; 0060]; and

(d) persistently referring each request associated with the connection to the selected server array controller until another method is selected for load balancing each request from the connection, wherein the selected server array controller associates the client's connection with the requested resource [0011; 0013; 0055; 0060].

However, Masters does not explicitly teach selecting one of plurality of server array controllers to handle each request. At the time the invention was made, one of ordinary skill in the art would have been motivated to employ a plurality of server array controllers in order to evenly distribute the client's request, therefore expanding the processing time of the request handling.

Regarding claim 2, Masters teaches the method of claim 1, wherein the client is a local domain name system (LDNS) server (figures 1A and 1B, 106).

Regarding claim 5, Masters teaches the method of claim 1, wherein the client employs a proxy server to send the request for the resource (figure 1A: 104).

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Regarding claim 6, Masters teaches the method of claim 1, wherein referring each request associated with the connection to the selected server array controller further comprises sending to the client an IP address associated with the selected server array controller (figure 5B; 0082).

Regarding claim 7, Masters teaches the method of claim 1, wherein the selected server array controller associates the client with a virtual server that includes the requested resource, wherein the virtual server is managed by the selected server array controller (figures 1A and 1B; 118 and 120).

Regarding claim 8, Masters teaches the method of claim 1, further comprising storing information associated with the request [0003].

Regarding claim 9, Masters teaches the method of claim 9, wherein the information includes an IP address associated with the client, another IP address associated with the server array controller, a time stamp, and a time to live [0004].

Regarding claim 10, Masters teaches the method of claim 1, wherein each request associated with the connection is made by any one of a plurality of LDNS servers (figures 1A and 1B: 106).

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Regarding claim 11, Masters teaches the method of claim 1, wherein the selected server array controller manages at least one virtual server that provides access to the requested resource (figures 1A and 1B; 118 and 120).

Regarding claim 12, Masters teaches the method of claim 1, wherein the selected method for load balancing includes one of static stripe, dynamic, and topological methods [0013].

Claims 18-22 are similar to claim 1, therefore are rejected under the same rationale.

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPAP 2002/0040400 by Masters in view of USPN 6,078,943 issued to Yu.

Regarding claim 13, Masters teaches a method for enabling a client to access a resource on a wide area network environment, comprising: load balancing a request from a connection associated with the client for handling by a selected server array controller, each subsequent and timely request from the connection is handled by the selected server array controller; and (b) when the subsequent request is untimely, load balancing the request from the connection for handling by another selected server array controller [0011; 0013; 0055; 0060].

However, Masters fails to explicitly teach employing an extended domain name system server to load balance the request from the client to the selected server.

Yu teaches (a) employing an extended domain name system (EDNS) server to load balance a request from a connection associated with the client for handling by a selected server array controller, each subsequent and timely request from the connection is persistently referred by the EDNS server for handling by the selected server array controller; and (b) when the subsequent request is untimely, employing the EDNS server to load balance the request from the connection for handling by another selected server array controller (figure 1, 62; col. 5, lines 4-28).

At the time the invention was made, one of ordinary skill in the art would have been motivated to employ an extended domain name system server to load balance a request from the client to a selected server because an EDNS supports non-standard domain naming, which facilitates more flexible domain name serving, thus making the system more efficient.

Regarding claim 14, Yu teaches the method of claim 13, wherein the EDNS server includes a data store for storing information associated with the request (figure 1, 62; col. 5, lines 4-28).

Regarding claim 15, Masters teaches the method of claim 13, further comprising providing metrics from each server array controller to the DNS server, wherein the metrics are

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used in the selection of the server array controller to handle the request from the connection [0060]. However, Masters fails to explicitly teach employing EDNS server. Yu teaches employing an EDNS server to load balance request from client to server (figure 1, 62; col. 5, lines 4-28).

At the time the invention was made, one of ordinary skill in the art would have been motivated to employ an extended domain name system server to load balance a request from the client to a selected server because an EDNS supports non-standard domain naming, which facilitates more flexible domain name serving, thus making the system more efficient.

Regarding claim 16, Yu teaches the method of claim 15, wherein the metrics include availability and round trip time (col. 2, line 64 to col. 3, line 5).

Regarding claim 17, although Yu does not explicitly teach the method of claim 14, further comprising another EDNS server that includes another data store for storing information associated with the request, wherein the EDNS and the other EDNS share request information between the data store and the other data store, one of ordinary in the art at the time the invention was made would have been motivated to employ another EDNS server in order to evenly distribute the client's request, therefore expanding the processing time of the request handling..

Allowable Subject Matter

Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3, the prior art of record fails to teach the method of claim 2, wherein the selected load balancing method employs modulus arithmetic to select a virtual server managed by the selected server array controller, including: (a) converting the LDNS server's IP address into a first value; (b) dividing the first value by the total amount (N) of virtual servers that are available, each available virtual server corresponding to a particular value of N; (c) adding one to a remainder of the dividing action to create a second value; and (d) selecting the virtual server that corresponds to the particular value of N that is one greater than the second value.

Claim 4 depends on objected claim 3, therefore would also be allowed if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. USPN 6,484,143 issued to Swildens et al.
2. P. Vixie, "Domain Name Anarchy: Extension Mechanism for DNS," RFC 2671, August 1999.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N Boutah whose telephone number is (703) 305-5104. The examiner can normally be reached on Monday-Thursday (9:00 am-7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703) 308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ANB


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